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| 09/863,299 | 05/24/2001 | Toyonori Sasaki | 103007.01 | 9529 |
| 25944 | 7590 | 06/10/2004 | EXAMINER | |
| OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320 | | | NGHIEM, MICHAEL P | |
| | | | ART UNIT | PAPER NUMBER |
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DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/863,299

Applicant(s)

SASAKI, TOYONORI

Examiner

Michael P Nghiem

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,46-54,56-68 and 70-73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 51,52,56-61 and 71-73 is/are allowed.
- 6) ☒ Claim(s) 1,46,47,49,53,62 and 65-67 is/are rejected.
- 7) ☒ Claim(s) 48,50,54,63,64,68 and 70 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/280,056.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11-03-03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The Amendment filed on May 18, 2004 has been acknowledged.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 46, 47, and 49 are rejected under 35 U.S.C. 102(e) as being anticipated by Shinada et al. (US 5,790,158).

Regarding claim 1, Shinada et al. discloses an ink cartridge (501), comprising:

- a case (case of 501) having a first surface (top surface of 501) on the outside of the case (Figs. 15's) and a second surface (bottom surface of 501) on the outside of the case in mutual opposition (Fig. 15a), the first surface being open (without 516);
- a first cover (516) for covering the first surface (Fig. 15a);

- a partitioning wall (510) for separating the interior of the case into a first chamber (512) and a second chamber (511);
- an ink supply hole (513) that is formed in a wall (bottom wall of 501) which defines the second chamber (Fig. 15a) and is in direct communication with the second chamber (Fig. 15a);
- an ink filling hole (515) formed in the first cover (Fig. 15a), the ink filling hole communicating with the second chamber (Fig. 15a); and
- a pressure reduction hole (514) formed in the first cover, the pressure reduction hole communicating with the first chamber (via 511, 519), wherein the first chamber and the second chamber communicate with each other near the second surface inside the case (via 519) such that ink is filled in the first chamber through the second chamber from the ink filling hole (ink fills 512 through 511, Fig. 15a).

Regarding claim 46, Shinada et al. discloses an ink discharge hole (bottom opening of 524) for discharging ink from the first chamber or the second chamber is formed in the second surface of the case (Figs. 15's).

Regarding claim 47, Shinada et al. discloses that the second surface is also open (without bottom wall of 501), a second cover (bottom wall of 501) is provided for covering the second surface, and the ink discharge hole is formed in the second cover (Figs. 15's).

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Regarding claim 49, Shinada et al. discloses that the ink filling hole and the pressure reduction hole are closed off by a first sealing material (542) applied to the first cover (Fig. 18a); and the ink discharge hole is closed off by a second sealing material (546) applied to the second surface so that the second sealing material can be peeled away (546 may be peeled away after being punctured by 550).

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 53 and 66 are rejected under 35 U.S.C. 102(b) as being anticipated by Ceschin et al. (US 5,489,932).

Regarding claims 53 and 66, Ceschin et al. discloses an ink cartridge (10) for holding ink supplied to a recording head (12), comprising:

- a case (case of 10) having a first surface (top surface of case) on the outside of the case and a second surface (bottom surface of case) on the outside of the case in opposition, the first and second surfaces being open (without 14c and 14b);
- a partitioning wall (14aa) formed integrally with the case and extending from the first surface toward the second surface (Fig. 1) for separating the interior of the case

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into an ink chamber (15) for holding ink and an atmosphere connection path (30) communicating to the outside of the case (via 32), the ink chamber being open on the first surface side and the second surface side (without 14c and 14b);

- a first cover (14c) which is a separate part from the case and is joined to the case and the partitioning wall at the first surface for covering the first surface of the case (Fig. 1), the first cover, the case and the partitioning wall forming a path for communicating air between the ink chamber and the atmosphere connection path (via 37);

- a second cover (14b) which is a separate part from the case and is joined to the case at the second surface for covering the second surface of the case (Fig. 1);

- an ink supply hole (18) which is joined to the recording head and is formed in the second cover so as to communicate with the ink chamber (Fig. 1).

Regarding claim 66, Ceschin et al. further discloses that the path and the first chamber are connected via a surface (bottom surface of 37) which does not contain an intersection line formed by the intersection of the upper case surface and a surface of the partitioning wall (bottom surface of 37 does not contain **any** intersection of **any** surface, Fig. 1).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 62 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinada et al. in view of Kanaya et al. (US 6,247,803).

Regarding claim 62, Shinada et al. further discloses that the second chamber is formed between one side wall (left side wall of 501, Fig. 15a) of the case and the partitioning wall (Fig. 15a).

Regarding claim 65, Shinada et al. further discloses an inner surface of the one side wall has undulating ribs (5118) extending vertically up and down (Fig. 17).

However, Shinada et al. does not disclose that at least one portion of the one side wall is transparent or semi-transparent.

Nevertheless, Kanaya et al. discloses at least one portion of the one side wall is transparent or semi-transparent (column 14, lines 64-67) for the purpose of determining the remaining quantity of ink.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Shinada et al. with a transparent side wall as disclosed by Kanaya et al. for the purpose of determining the remaining quantity of ink.

Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ceschin et al. in view of Shinada et al..

Ceschin et al. further discloses a porous material (17) absorbing ink is accommodated in the first chamber (Fig. 1).

However, Ceschin et al. does not disclose a projecting part that projects to the inside of the first chamber is formed on the upper surface of the case, at a position apart from the partitioning wall, and the projecting part pushes against the porous material in the first chamber.

Nevertheless, Shinada et al. discloses an ink container (Figs. 15a, 15b) comprising a projecting part (516a, 516b) that projects to the inside of the first chamber is formed on the upper surface of the case, at a position apart from the partitioning wall, and the projecting part pushes against the porous material in the first chamber (Figs. 15a, 15b) for the purpose of improving the capillarity of the porous material.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Ceschin et al. with a projecting part as disclosed by Shinada et al. for the purpose of improving the capillarity of the porous material.

Allowable Subject Matter

4. Claims 48, 50, 54, 63, 64, 68, and 70 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 51, 52, 56-61, and 71-73 are allowed.

Reasons For Allowance

6. The combination or method as claimed wherein an ink cartridge including an atmosphere connection hole for communicating with the first chamber is formed in the second cover or second surface (claims 48, 50) or one end of the atmosphere connection chamber communicates with the ink chamber on the first surface side to communicate air between the ink chamber and the atmosphere connection chamber, and the other end of the atmosphere connection chamber communicates with the outside of the case (claim 51) or a second partitioning wall for dividing the ink chamber into a first chamber for accommodating a porous material absorbing ink and a second

chamber holding ink, wherein one of the first chamber and the second chamber is covered by the first cover and the other of the chambers is covered by the second cover (claims 54, 71) or one end of the atmosphere connection path communicates with the other end of the first chamber for communicating substantially only air between the atmosphere connection path and the first chamber via the second partitioning wall and the other end of the atmosphere connection path is open to the outside of the case (claim 56) or the first chamber has a larger capacity than the second chamber and accommodates a porous material absorbing the ink and the second chamber directly communicates with the ink supply hole (claim 63) or the path is formed by a concavity on the outside surface of the upper surface of the case, extending from the first chamber to the atmosphere connection chamber, a first hole connecting the concavity and the first chamber, a second hole connecting the concavity and the atmosphere connection chamber, and sealing material covering the concavity (claim 68) or joining a cover which is separate from the case to the case at the second surface for covering the second surface (claims 72, 73) is not disclosed, suggested, or made obvious by the prior art of record.

Response to Arguments

7. Applicant's arguments filed May 18, 2004 have been fully considered but they are not persuasive.

With respect to the 35 USC 102 rejections, Applicants argue that Kanaya fails to disclose an ink cartridge with an ink supply hole that is formed in a wall which defines the second chamber and is in direct communication with the second chamber or a first chamber and a second chamber that communicate with each other near the second surface inside the case such that ink is filled in the first chamber through the second chamber from the ink filling hole.

Examiner's position is that Shinada discloses "an ink cartridge (501) with an ink supply hole (513) that is formed in a wall (bottom wall of 501) which defines the second chamber (511) and is in direct communication with the second chamber (Fig. 15a)" or "a first chamber (512) and a second chamber (511) that communicate with each other near the second surface inside the case (via 519) such that ink is filled in the first chamber through the second chamber from the ink filling hole (ink fills 512 through 511, Fig. 15a).

Applicants further argue that Ceschin fails to disclose an ink cartridge with a second cover which is separate from the case and is joined to the case.

Examiner's position is that the second cover (4) of the instant application may be separate from the case during the manufacturing or assembly process. However, once it is joined to the case, it becomes an integrated portion of the case (Fig. 1). Ceschin discloses a second cover (14b) joined to the case (case of 10) (Fig. 1). Furthermore, it has been held that determination of patentability of a product is based on the product

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itself and does not depend on its method of production. In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985).

Applicants further argue that Ceschin fails to disclose an ink cartridge with a partitioning wall with one end of the wall joined to the upper case surface or a path for connecting the first chamber and the atmosphere connection chamber, formed in the upper case surface, wherein the path and the first chamber are connected via a surface which does not contain an intersection line formed by the intersection of the upper case surface and a surface of the partitioning wall, as recited in claim 66.

Examiner's position is that Ceschin discloses "an ink cartridge (10) with a partitioning wall (14aa) with one end of the wall joined to the upper case surface (represented by two solid vertical lines, at 37, from 14aa to 14c, Fig. 1)" or "a path (37) for connecting the first chamber (15) and the atmosphere connection chamber (30), formed in the upper case surface (top surface of 14aa, Fig. 1), wherein the path and the first chamber are connected via a surface (bottom surface of 37) which does not contain an intersection line formed by the intersection of the upper case surface and a surface of the partitioning wall (bottom surface of 37 does not contain **any** intersection formed by **any** surface)". Please note that the top surface of (14aa) is above the bottom surface of (37).

The rejections of claims 49, 65, and 67 are addressed above.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (571) 272-2277. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (571) 272-2269. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


MICHAEL NGHIEM
PRIMARY EXAMINER

Michael Nghiem

June 4, 2004